Fuji Photo Film Co., Ltd.) by using the resultant ink and an ink-jet printer (PM-700C, made by Seiko Epson Corp.), the product was diluted with ion exchanged water so that the absorbance thereof would be 0.5-2.5. The photo glossy paper on which the image was recorded was preserved at 80 ° C. for one week. Image densities before and after the preservation were measured with a reflection densitometer (x-Rite 310TR). The dye rate of retention thereof was evaluated so that the remaining amount of the ink using any one of the products (B-61)-(B-65) was 90% or more. Thus, the ink was good.

Example 9

[0469] This example was carried out in the same manner as in Preparation Example 2 except that the oil soluble dye (I-30) was replaced by each of dyes (I-36), (I-84), (I-85), (I-88), and (I-90), so as to prepare each of coloring compositions (B-71)-(B-75) whose solid content by percentage was 20%. Further, this example was carried out in the same manner as in Example 1 except that the coloring composition (B-1) was replaced by each of the coloring compositions (B-71)-(B-75), so as to prepare an ink for ink-jet. When an image was recorded on photo glossy paper (ink-jet paper (photo grade), made by Fuji Photo Film Co., Ltd.) by using the resultant ink and an ink-jet printer (PM-700C, made by Seiko Epson Corp.), the product was diluted with ion exchanged water so that the absorbance thereof would be 0.8-1.2. The visible absorption spectrum thereof was evaluated. The ink using any one of the products (B-71)-(B-75) had a sharp waveform. Thus, the ink was preferable. The sharpness of the waveform was evaluated on the basis of the widths of the waveforms at 50% and 15% of the maximum absorption intensity.

Example 10

[0470] This example was carried out in the same manner as in Preparation Example 2 except that the oil soluble dye (I-30) was replaced by each of dyes (I-3), (I-6), (I-36), (I-40), (I-48), (I-80), and (I-85), so as to prepare each of coloring compositions (B-81)-(B-87) whose solid content by percentage was 20%. Further, the example was carried out in the same manner as in Example 1 except that the coloring composition (B-1) was replaced by each of the coloring compositions (B-81)-(B-87), so as to prepare an ink for ink-jet. Each of the resultant inks was allowed to stand still at 40° C. for 7 days. Thereafter, the ink was filtered with a filter having 0.2 μm mesh. From the colored degree of the used filter, the thermal stability of the ink was evaluated. As a result, the ink having any one of the products (B-81)-(B-87) was good.

[0471] According to the present invention, it is possible to provide a coloring composition which is superior in disperse-stability of coloring particulates, water resistance and light resistance, is not dependent on the type of paper, is good in color developability and a color tone (in particular, color reproducibility of magenta) at the time of printing on paper arbitrarily selected, and is suitable for use as an aqueous ink for writing, an aqueous ink for printing, an ink for information recording and so on; an ink for ink-jet which is suitable for thermal, piezoelectric, electric field or sound ink-jet printing, does not cause blocking of the tip of a nozzle for printing, and is good in color developability and a color tone (in particular, color reproducibility of magenta) when printing on any type of paper regardless of paper type, and is also superior in water resistance and light resistance; and an ink-jet recording process using the ink.

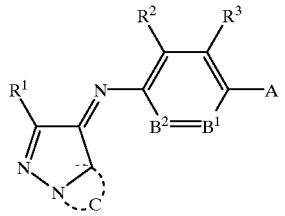
What is claimed is:

1. An ink for ink-jet comprising:

a coloring composition containing coloring particulates dispersed in a water based medium, the coloring particulates containing an oil soluble dye and an oil soluble polymer; and wherein the coloring composition has wavelength of maximum absorption (λ max(nm)) in the wavelength range from 510 to 560 nm and when the absorbance at the wavelength of maximum absorption (λ max(nm)) is regarded as 1, the absorbance at a wavelength (λ max+75 (nm)) is no more than 0.2 and the absorbance at a wavelength (λ max−75 (nm)) is no more than 0.4.

2. The ink for ink-jet according to claim 1, wherein the oil soluble dye is represented by the formula (I):

Formula (I)



wherein R^1 represents a hydrogen atom, an aliphatic group, an aromatic group, a heterocyclic group, a cyano group, —OR^{11}, —SR^{12},—CO_2R^{13},—$OCOR^{14}$,—$NR^{15}R^{16}$,—$CONR^{17}R^{18}$,—SO_2R^{19},—$SO_2NR^{20}R^{21}$,—$NR^{22}CONR^{23}R^{24}$,—$NR^{25}CO_2R^{26}$,—COR^{27},—$NR^{28}COR^{29}$, or —$NR^{30}SO_2R^{31}$; and R^{11}, R^{12},R^{13},R^{14},R^{15},R^{16},R^{17},R^{18},R^{19},R^{20},R^{21},R^{22},R^{23}, R^{24}, R^{25},R^{26},R^{27},R^{28},R^{29},R^{30} and R^{31} each independently represents a hydrogen atom, an aliphatic group, or an aromatic group;

A represents —NR^4R^5 or a hydroxyl group; R^4 and R^5 each independently represents a hydrogen atom, an aliphatic group, an aromatic group or a heterocyclic group; B^1 represents =$C(R^6)$— or =N—; B^2 represents —$C(R^7)$= or —N=; R^2,R^3,R^6 and R^7 each independently represents a hydrogen atom, a halogen atom, an aliphatic group, an aromatic group, a heterocyclic group, a cyano group, —OR^{51}, —SR^{52},—CO^2R^{53},—$OCOR^{54}$,—$NR^{55}R^{56}$,—$CONR^{57}R^{58}$,—SO^2R^{59},$SO_2NR^{60}R^{61}$,—$NR^{62}CONR^{63}R^{64}$,—$NR^{65}CO_2R^{66}$,—COR^{67},—$NR^{68}COR^{69}$ or —$NR^{70}SO_2R^{71}$; R^{51},R^{52},R^{53},R^{54},R^{55},R^{56},R^{57},R^{58}, R^{59},R^{60},R^{61},R^{62},R^{63},R^{64},R^{65},R^{66},R^{67}, R^{68},R^{69},R^{70} and R^{71} each independently represents a hydrogen atom, an aliphatic group or an aromatic group; R^2 and R^3, R^3 and R^4, R^4 and R^5,R^5 and R^6, or R^6 and R^7 may be bonded to each other to form a ring;

C forms a 5- or 6-membered nitrogen-containing heterocycle, the heterocycle being substitutable with at least